IN THE CLAIMS

Please enter claims 1, 13, and 15 and new claims 40-42.

1. (Currently amended) An electrical structure comprising:

a silicon-containing material having a surface; and

an organic layer chemically bonded to the surface of the silicon-containing material, wherein an electrical property of the electrical structure is significantly ~~changed~~ improved compared to a same structure without the organic layer.

2. (Original) The electrical structure of claim 1, wherein the organic layer affects the electrical property within the silicon-containing material.

3. (Original) The electrical structure of claim 2, wherein the electrical property is selected from a group consisting of a surface recombination velocity, carrier lifetime, electronic efficiency, voltage, device capacitance, contact resistance, and resistance of a doped region.

4. (Original) The electrical structure of claim 1, wherein the organic layer comprises a hydrocarbon.

5. (Original) The electrical structure of claim 1, wherein the organic layer comprises a polymer.

6. (Withdrawn)

7. (Withdrawn)

8. (Withdrawn)

DO NOT ENTER 8/13/03 CK

9. (Original) The electrical structure of claim 1, wherein the silicon-containing material is substantially monocrystalline.

10. (Original) The electrical structure of claim 1, wherein the silicon-containing material is polycrystalline.

11. (Original) The electrical structure of claim 1, wherein the silicon-containing material is substantially amorphous.

12. (Original) The electrical structure of claim 1, wherein a portion of the silicon-containing material immediately adjacent to the organic layer has a porosity no greater than approximately 30 percent.

13. (Currently amended) A process for forming an electrical device comprising:

providing a silicon-containing material having a surface; and

forming an organic layer chemically bonded to the surface of the silicon-containing material, wherein an electrical property of the electrical device is significantly ~~different~~ improved compared to a same device if the organic layer is not formed.

14. (Original) The process of claim 13, wherein the organic layer affects the electrical property within the silicon-containing material.

15. (Currently amended) The process of claim 14, wherein the electrical property is selected from a group consisting of ~~an~~ surface recombination velocity, carrier lifetime, electronic efficiency, voltage, contact resistance, and resistance of a doped region.

16. (Original) The process of claim 13, wherein the organic layer comprises a monolayer.

17. (Original) The process of claim 13, wherein the organic layer comprises a polymer.

18-20. (Withdrawn)

21. (Original) The process of claim 13, wherein forming the organic layer comprises:

activating the surface of the silicon-containing material to form an activated surface;

reacting the activated surface with a chemical, wherein during the reaction, a hydrocarbon group becomes chemically bonded to the silicon-containing material.

22. (Original) The process of claim 21, wherein activating comprises halogenating the surface of the silicon-containing material to form the activated surface.

23. (Original) The process of claim 22, wherein the hydrocarbon group has no more than nine carbon atoms.

24. (Original) The process of claim 23, wherein the hydrocarbon group is an alkyl group.

25. (Original) The process of claim 21, wherein the hydrocarbon group is an allyl group.

26. (Original) The process of claim 21, further comprising forming a polymer layer from the allyl group.

27. (Original) The process of claim 21, wherein the hydrocarbon group is an alkoxide group.

28. (Original) The process of claim 13, wherein the silicon-containing material is substantially monocrystalline.

29. (Original) The process of claim 13, wherein the silicon-containing material is polycrystalline.

30. (Original) The process of claim 13, wherein the silicon-containing material is substantially amorphous.

31-39. (Withdrawn)

40. (New) An electrical structure comprising:

a silicon-containing material having a surface and at least one electrode, wherein the silicon-containing material is capable of conducting electric current, and

an organic layer chemically bonded to the surface of the silicon-containing material, wherein an electrical property of the electrical structure is significantly improved compared to a same structure without the organic layer.

41. (New) The electrical structure of claim 1, wherein the structure without the organic layer comprises a silicon-containing material having a surface, wherein the surface is a hydrogen terminated surface.

42. (New) The electrical structure of claim 1, wherein the structure without the organic layer comprises a silicon-containing material having a surface, wherein the surface is an oxidized surface.